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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,293	10/31/2003	Samuel J. Lewis	HES 2003-IP-011770U1	1381
28857	7590	01/25/2006	EXAMINER	
CRAIG W. RODDY HALLIBURTON ENERGY SERVICES P.O. BOX 1431 DUNCAN, OK 73536-0440			MARCANTONI, PAUL D	
			ART UNIT	PAPER NUMBER
			1755	
DATE MAILED: 01/25/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/698,293

Applicant(s)

LEWIS ET AL.

Examiner

Paul Marcantoni

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-30,34-40 and 87-113 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-30,34-40 and 87-113 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

The applicants' response filed 11/14/05 has been considered but it is not persuasive.

The applicants' amendment necessitated the new grounds of rejection below:

New Matter-Objection to the Specification:

The applicants deletion of co-surfactant, surfactant, anionic surfactant, etc. removed from the original disclosure would appear to be a new matter deletion. For instance, with respect to paragraph [0019], the original disclosure only required that the surfactant should be anionic and that in "certain exemplary embodiments, the anionic surfactant comprises a hydrolyzed protein or derivative thereof". The applicants have effectively narrowed the scope of their invention in, for example, [0019], by deleting "surfactant" (broadly anionic surfactant) and limiting the specification now to hydrolyzed protein. This narrowing of scope is a new matter deletion.

New Matter- Claims:

Newly added claims 87-113 are rejected under the first paragraph of 35 USC 112 and 35 USC 132 as the specification as originally filed does not provide support for the invention as is now claimed.

Applicants may easily resolve by pointing out the location of support for each claim from their original disclosure (specification and claims). Should they do so, this rejection will be promptly withdrawn.

35 USC 112 Second Paragraph:

Claims 1, 5-30, 34-40, and 87-113 are rejected under 35 USC 112 second paragraph as failing to set forth the subject matter which applicants regard as their invention.

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The term "desired" remains indefinite in claim 1 and now new claim 87. The term "low" density cement is indefinite in claim 24 and now new claim 109. Desired is synonymous to predetermined and its meaning is indefinite. The term "low" is a relative and indefinite term and applicants have not defined what they mean by "low" density cement by showing a numerical means so it is clear for the record.

Obviousness Type Double Patenting:

Claims 1, 5-30, 34-40, and 87-113 are rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claims 14 and 52 of US Patent Numbers 6,454,004 B2 (Reddy et al.) and US 6,793,730 B2 (Reddy et al.) alone or in view of Cattanach (US Patent No. 3,615,784 or FR 1550231).

This rejection remains. Applicants did not submit a proper terminal disclaimer.

35 USC 103:

Claims 1, 5-30, 34-40, and 87-113 are rejected under 35 USC 103(a) as being unpatentable over Sugama '395, Gay et al. '295 B1, Neely Jr. '661 B2, or Etherton (EP 1103533) alone or in view of Chatterji (US 5,897,699 or 6,063,738), Bour et al. (US 5,147,565), Cattanach (US Patent 3,615,784 or FR 1550231), Gopalkrishnan (US 5,252,128), or DiLullo Arias et al. (US 6,235,809 B1).

Response:

35 USC 103:

The applicants argue "method of cementing" but seem to imply that the prior art does not teach a method of well cementing and in a subterranean zone. Neither of these limitations is within the claims and it is improper for applicants to argue features

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not present in their own claims. The applicants' method of cementing reads upon any method of using cement whether for a building, a fencepost, a road, a coating, etc. How else is a cement composition to be used but in a method or process of cementing?

The applicants argue that the intended use of Sugama is different than their own. Sugama uses hydrolyzed proteins and surfactants as foam generators. Yet, since it is the same component and exactly the same, it will also function as a dispersant. The applicants also argue negative limitations that are not present in the claims. The applicants do not have a limitation that their surfactant or hydrolyzed protein is not a foam generator nor is it clear whether there is such support for this negative limitation. It is the examiner's position that the prior art still teaches a method of cementing even though the addition of the same components may be for a different reason. The examiner maintains that as long as there is motivation and a teaching that is sufficient.

It is expected that the presence of the same surfactants will lead to the same results; That is dispersion. It is also noted that applicants use the terms "to disperse at least some of the cement composition". Claim 1 contains no amounts that are needed to disperse so applicant's dispersant (including hydrolyzed protein) read upon any amount greater than zero.

The secondary references have the motivation in that it is old and known in the art to add foaming agents and foam stabilizer agents to cement and though the purpose is not the same (ie the reason for combining), as long as there is motivation to use these two components (surfactant and hydrolyzed protein) together that is sufficient. It is also noted that applicants claimed "hydrolyzed protein" itself is an anionic surfactant

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(see page 6, [0019], lines 2-3 wherein it states that the dispersant compositions of the present invention should be anionic and the anionic surfactant comprises (is) a hydrolyzed protein or derivative thereof. The applicants have not even distinguished in their independent claims the difference between one claimed generic surfactant and the other surfactant (the anionic surfactant known as a hydrolyzed protein).

The applicants argue Gay in a similar manner. Yet, applicants are referred to the Gay abstract that teaches a foaming agent is used to form a foam within the mixture to ~~increase~~^{increase} the flowability of the particulates. That is exactly the same function as a dispersant which is to improve flowability by dispersing particles from agglomeration. The applicants argue that Gay does not teach a hydrolyzed protein and a surfactant. In rebuttal, as mentioned above, a hydrolyzed protein is one in the same with a surfactant because it is a surfactant. Dispersion would occur because Gay even teaches flowability is increased and this can only be done by dispersion of the particles to prevent clumping or agglomeration (ie the whole point of a dispersant or dispersing agent).

The applicants again argue that Gay teaches a POLYOX foam stabilizer and is not a foam surfactant. Yet, the motivation for combining references does not have to be the same because POLYOX (polyethylene oxide) and betaine or both known foam stabilizers and the use of one or the other would have been an obvious design choice for one of ordinary skill in the art. The motivation to combine the references does not have to be the same. There is motivation to use a hydrolyzed protein and a betaine

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together in a cementing composition and thus a method of cementing (broadly any kind of cement use or process) because they are conventional ingredients to cement.

It is also noted that Gay teaches additionally that "water dispersing agents" can be added to his mixture such as lignosulfonate salts, etc. (see listing of the different water dispersing agents in column 5, lines 60-65). These water dispersing agents are dispersants are surfactants. Dispersants are commonly understood in the art as synonymous with surfactants.

The applicants argue Neely again noting that it does not teach dispersing and is referred to coating "compositions". In rebuttal, it should be evident that any composition requires a process of using it. Further, Neeley teaches an alkali metal silicate cement. Neely also teaches mixing a wetting agent (which is a surfactant-further a dispersant itself is a surfactant) such as surfactants including non-ionic, cationic, anionic, amphoteric, and zwitterionic (col.6, lines 40-50). Neely teach the addition of hydrolyzed protein (col.7, line 15) and is used as a humectant. It is the examiner's position that the motivation of combining different components or ingredients does not have to be the same as applicants' claimed method. Further, the same ingredient (hydrolyzed protein) would also effectively disperse the cement composition. The examiner also notes that there is motivation to combine the secondary references because it is known to use foaming agents (e.g. a known foaming agent) and foam stabilizers (e.g. cocobetaine) in cementitious compositions.

The applicants argue that Neely teaches a *coating* composition. Yet, are applicants themselves not also claiming and using a coating composition? Do they not

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also coat the sidewalls of the wellbore with their cement composition containing hydrolyzed protein and a surfactant? They do coat their wellbore sidewalls with cement. Thus, the applicants own coating composition can also be applied to any substrate as well.

Etherton (EP 1103533 abstract) teaches a process for cementing to make concrete by mixing cement with hydrolyzed protein and surfactants. Etherton teaches the same components in a method of cementing to make a cellular concrete and one of ordinary skill in the art would have understood the same components which are surfactants would disperse the cement compositions. Again, a dispersant is a surfactant. The secondary reference can be combined with Etherton because it is known to use foaming agents (e.g. a known foaming agent) and foam stabilizers (e.g. cocobetaine) in cementitious compositions.

ODP Response:

First, it is noted that Reddy et al. (US 6,454,004 B2) **teaches** in claim 14. column 13 a method of cementing involving adding to the cement a foaming agent and foam stabilizing additive including hydrolyzed **keratin** (e.g. a hydrolyzed protein-see p.6, paragraph [0019] of applicants' specification] and **cocoamidopropyl betaine**. (see p.6 paragraph [0020] of applicants' specification-see second to last line of this paragraph). Second, it is noted that Reddy et al. (US 6,793,730 B2) also teach a method of cementing by also mixing hydrolyzed keratin and cocoamidopropyl betaine (See claim 52 in column 24). It is evident that both Reddy patents meet applicants' claim limitations. Cattnach (US Patent 3,615,784 or FR 155231) teaches that the use of

another known foaming agent such as hydrolyzed casein in the Reddy cement compositions (and thus methods of cementing) would have been an obvious design choice for one of ordinary skill in the art because both are functionally equivalent as foaming agents. Further, there is motivation that a foaming agent and foam stabilizer be present in a method of cementing in accordance with the Reddy patent teachings.

The applicants argue that Reddy may teach a method of cementing but do not teach dispersion. In rebuttal, foaming agents are known in the art to improve flowability as mentioned above and thus improve dispersion. The examiner has provided motivation to why Cattnach can be combined. The rejection is proper and maintained for the reasons stated above. No terminal disclaimer was provided and applicants only argued the impropriety of this rejection. The examiner again maintains it is proper and again respectfully requests applicants to submit a proper terminal disclaimer.

35 USC 112 Second Paragraph:

The applicant again argues *desired* is not indefinite yet does not define what it means. It is the same as *predetermined* and this term has been held in earlier decisions to be indefinite. It is not understood why applicants did not simply delete this term as it does not change the scope of their invention. It would resolve this issue but if applicants persist, then so be it.


The examiner gratefully acknowledges removal of the terms HLB and EVIROGEM from the claims and have written out the terms to what they stand for for future clarification.

The applicants maintain that “low density cement” is definite and one of ordinary skill in the art would understand what it means. They state the examiner has failed to show that this term would not be understood to that person of ordinary skill in the art. In rebuttal, the examiner respectfully notes that Halliburton is comprised of those persons of ordinary skill in the art (as they commonly do method of cementing processes especially with respect to well cementing) to specifically state for the record what the term “low” density cement means in the art. If applicants cannot define their own invention by providing a definition of what they mean by *low* or range of what they deem low, the term is then indefinite.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Marcantoni whose telephone number is 571-272-1373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul Marcantoni
Primary Examiner
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